

What is claimed is:

1. An article conveying apparatus for conveying and transferring articles between a plurality of article storage sections for storing the articles therein and a predetermined entry-and-exit port, the apparatus comprising:

a running truck body that runs along a track;

a platform provided with a transfer device that transfers the articles;

a longitudinal pair of raising and lowering poles connected to said running truck body and extending vertically to guide and support said platform to be able to freely rise and lower;

a pair of raising and lowering ropes each having one end connected to an upper part of a corresponding one of the longitudinally opposite sides of said platform to suspend and support said platform; and

a driving wheel for feeding and winding said pair of raising and lowering ropes,

wherein said raising and lowering ropes are each guided from the upper part of the corresponding one of the longitudinally opposite sides of said platform to a vicinity of a central portion of said running truck body via said driving wheel, the other end of said raising and lowering ropes being connected to a vicinity of a center of said platform.

2. The article conveying apparatus according to claim 1, wherein a tension setting device that sets a tension of said pair of raising and lowering ropes is arranged in said platform.

3. The article conveying apparatus according to claim 2, wherein said tension setting device comprises:

a spring for setting the tension of each of said raising and lowering ropes; and

an error detecting unit provided in said platform to detect an error in said raising and lowering ropes on the basis of elongation of said spring.

4. The article conveying apparatus according to claim 2, wherein said tension setting device comprises:

a spring;

a moving member having one end connected to the other end of said raising and lowering rope and the other end connected to one end of said spring;

a setting jig connected to the other end of said spring to set the tension of said raising and lowering rope; and

a detector for detecting, according to the moved distance of said moving member, that an error has occurred in elongation of said raising and lowering rope and that said raising and lowering rope has been cut.

5. The article conveying apparatus according to claim 1, wherein said driving wheel is arranged at each of longitudinally opposite ends of said running truck body.

6. The article conveying apparatus according to claim 5, comprising:

a first guide wheel provided at a top portion of one of the raising and lowering poles to guide one of said pair of raising and lowering ropes in a horizontal direction from one end of an upper part of said platform;

a pair of second guide wheels provided at a top portion of the other raising and lowering pole to guide downward one of the raising and lowering ropes guided from said first guide wheel and to guide the other of the ropes downward from the other end of the upper part of said platform;

a pair of third guide wheels provided at a bottom portion of said other raising and lowering pole to guide the pair of raising and lowering ropes guided from said second guide wheel to said driving wheel; and

a pair of fourth guide wheels provided in a central portion of said running truck body to guide said pair of raising and lowering ropes guided from said driving wheel to a lower part of the center of said platform.